

ABSTRACT

An extrusion process for manufacturing thermosetting powder coating compositions is disclosed. A base material is fed to an extruder body such as from a pre-mix hopper; in one embodiment, hard to incorporate additives, such as pigments, are added to the base material after they exit from the pre-mix hopper and before they exit from the extruder body. In another embodiment, hard to incorporate additives in a dried form are added with the base material. The combined base material and hard to incorporate additives are mixed through at least a portion of the extruder body to form a homogeneous thermosetting powder coating composition. The output of the extruder body may be monitored for composition accuracy, wherein the amount of hard to incorporate additives added is dynamically adjusted based upon the monitored output. The process may be repeated for thermosetting powder coating compositions having distinct hard to incorporate additives utilizing a common base material in the pre-mix hopper. Use of one or more hyperdispersed pigments in the formation of a powder coating is also disclosed.